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ART UNIT 3677		PAPER NUMBER		
NOTIFICATION DATE 03/25/2009		DELIVERY MODE ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PATDOCTC@fr.com

Office Action Summary

Application No.

10/688,031

Applicant(s)

CLARNER, MARK A.

Examiner

RUTH C. RODRIGUEZ

Art Unit

3677

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 November 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 8-16, 21-26, 29-31, 35-38, 40-42, 46-50, 52, 56 and 57 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 8-16, 21-26, 29-31, 35-38, 40-42, 46-50, 52, 56 and 57 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-946)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-3, 8-16, 23-25, 30, 31, 46-48, 52, 56 and 57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Seth (US 7,048,984 B2).

Seth discloses a touch fastener component (14) having a sheet-form base (20) and an array of fastener elements (21). Each fastener element comprises a molded stem (15) extending outwardly from and integrally with the sheet-form base and a head (17) extending forward from a distal end of the stem to a tip. The head has a lower surface forming a crook (19) for retaining loops. The head has an overall height, measured perpendicular to the sheet-form base from a lowermost extend of the tip to an uppermost extend of the head (292 μm) that is greater than 52 percent of an overall height of the fastener (556 μm). Seth fails to disclose that the head has an overall height, measured perpendicular to the sheet-form base from a lowermost extent of the tip to an uppermost extent of the head that is greater than 55 percent of an overall height of the fastener element, measured perpendicular to the sheet-form base and wherein a ratio of an overall height of the crook measured perpendicular to the sheet-

form base from a lowermost extent of the tip to an uppermost extent of the crook to an entrance height measured perpendicular to the sheet-form base below a lowermost extent of the tip is greater than 0.6. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have the head having an overall height measured perpendicular to the sheet-form base from a lowermost extent of the tip to an uppermost extent of the head that is greater than 55 percent of an overall height of the fastener element measured perpendicular to the sheet-form base and wherein a ratio of an overall height of the crook measured perpendicular to the sheet-form base from a lowermost extent of the tip to an uppermost extent of the crook to an entrance height measured perpendicular to the sheet-form base below a lowermost extent of the tip is greater than 0.6 since a change in the size of a prior art device is a design consideration within the skill of the art. In re Rose, 220 F.2d 459, 105 USPQ 237 (CCPA 1955). In this case, a person of ordinary skill in the art has a good reason to pursue the increase in the overall height measured perpendicular to the sheet-form base from a lowermost extent of the tip to an uppermost extent of the head since it would be obvious to try such a change and this change has a reasonable expectation of success. KSR International C. v. Teleflex, Inc., 82 USPQ2d at 1396 (2007). The dimensions of the fastening elements are commonly changed within the hook or loop fastening art in order to increase or decrease the separation force required for disengaging the touch fastener from a loop fastener. In this case, the increase in the overall height measured perpendicular to the sheet-form base from a lowermost extent of the tip to an uppermost extent of the head will provide the anticipated success of

increasing the force required to separate the touch fastener from a loop fastener since the added crook height will prevent the disengagement of the fastening element from the loop fastener. Especially since the value disclosed by Seth is very close to the claimed value. Additionally, a ratio of an overall height of the crook measured perpendicular to the sheet-form base from a lowermost extent of the tip to an uppermost extent of the crook to an entrance height measured perpendicular to the sheet-form base below a lowermost extent of the tip is greater than 0.6, this claim limitation is met as the height of the head is increased since the entrance height decreases as the height of the head increases and the overall height of the crook also increases as the height of the head is increased because the height of the head is increased by lowering the lowermost extent of the tip.

Each fastener element has multiple heads extending in different directions and forming separate crooks (Fig. 6a).

Each fastener element has two heads extending in essentially opposite directions (Fig. 6a).

The overall head height is less than 60 percent of the overall height of the fastener element (Example 3 of Table 1).

The tip extends toward the base (Fig. 6a).

The lower surface of the head is arched (Fig. 6a).

The head and stem form a unitary molded structure (Figs. 6a and 6b).

The head has a surface of resin cooled against a mold surface (C. 3, L. 56-57).

The stem has opposing surfaces defined by severed resin (Fig. 6a).

The stem and head have side surfaces lying in parallel planes (Figs. 6a and 6b).

The crook overhangs a surface of the stem (Figs. 6a and 6b).

The overhung stem surface extends at an inclination angle of between about 20 and 30 degrees with respect to a normal to the base (Fig. 6a).

The fastener elements together cover at least 20 percent of an overall surface area of the base from which the fastener elements extend (Fig. 5).

Seth discloses a touch fastener component (14) having a sheet-form base (20) and an array of fastener elements (21). Each fastener element comprises a molded stem (15) extending outwardly from and integrally with the sheet-form base and two heads (18) extending in opposite direction from a distal end of the stem to corresponding tips. The heads have lower surfaces forming crooks (19) for retaining loops. At least one head has an overall height, measured perpendicular to the sheet-form base from a lowermost extend of the tip to an uppermost extend of the head (292 μm) that is greater than half of an overall height of the fastener (556 μm). Seth fails to disclose that a ratio of an overall height of each crook, measured perpendicular to the sheet-form base from a lowermost extent of the tip to an uppermost extent of the crook, to an entrance height measured perpendicular to the sheet-form base below a lowermost extent of the tip, is greater than 0.6. However, it would have been obvious to one having ordinary skill in the art at the time of Applicant's invention that a ratio of an overall height of each crook, measured perpendicular to the sheet-form base from a lowermost extent of the tip to an uppermost extent of the crook, to an entrance height measured perpendicular to the sheet-form base below a lowermost extent of the tip, can

be greater than 0.6 since a change in the size of a prior art device is a design consideration within the skill of the art. In re Rose, 220 F.2d 459, 105 USPQ 237 (CCPA 1955). In this case, a person of ordinary skill in the art has a good reason to pursue the increase in the overall height measured perpendicular to the sheet-form base from a lowermost extent of the tip to an uppermost extent of the head since it would be obvious to try such a change and this change has a reasonable expectation of success. KSR International C. v. Teleflex, Inc., 82 USPQ2d at 1396 (2007). The dimensions of the fastening elements are commonly changed within the hook or loop fastening art in order to increase or decrease the separation force required for disengaging the touch fastener from a loop fastener. In this case, the increase in the overall height measured perpendicular to the sheet-form base from a lowermost extent of the tip to an uppermost extent of the head will provide the anticipated success of increasing the force required to separate the touch fastener from a loop fastener since the added crook height will prevent the disengagement of the fastening element from the loop fastener. Especially since the value disclosed by Seth is very close to the claimed value. Additionally, a ratio of an overall height of the crook measured perpendicular to the sheet-form base from a lowermost extent of the tip to an uppermost extent of the crook to an entrance height measured perpendicular to the sheet-form base below a lowermost extent of the tip is greater than 0.6, this claim limitation is met as the height of the head is increased since the entrance height decreases as the height of the head increases and the overall height of the crook also increases as the height of the head is increased because the height of the head is increased by lowering the lowermost extent of the tip.

Both of the heads have overall heights that are greater than half of the overall height of the fastener element (Example 3 of Table 1).

Seth discloses a touch fastener component (14) having a sheet-form base (20) and an array of fastener elements (21). Each fastener element comprises a molded stem (15) extending outwardly from and integrally with the sheet-form base and a head (18) extending from a distal end of the stem to a tip. The head has a lower surface forming a crook (19) for retaining loops. Seth fails to disclose that a ratio of an overall height of each crook, measured perpendicular to the sheet-form base from a lowermost extent of the tip to an uppermost extent of the crook, to an entrance height measured perpendicular to the sheet-form base below a lowermost extent of the tip, is greater than 0.6. However, it would have been obvious to one having ordinary skill in the art at the time of Applicant's invention that a ratio of an overall height of each crook, measured perpendicular to the sheet-form base from a lowermost extent of the tip to an uppermost extent of the crook, to an entrance height measured perpendicular to the sheet-form base below a lowermost extent of the tip, can be greater than 0.6 since a change in the size of a prior art device is a design consideration within the skill of the art. In re Rose, 220 F.2d 459, 105 USPQ 237 (CCPA 1955). In this case, a person of ordinary skill in the art has a good reason to pursue the increase in the overall height measured perpendicular to the sheet-form base from a lowermost extent of the tip to an uppermost extent of the head since it would be obvious to try such a change and this change has a reasonable expectation of success. KSR International C. v. Teleflex, Inc., 82 USPQ2d at 1396 (2007). The dimensions of the fastening elements are commonly

changed within the hook or loop fastening art in order to increase or decrease the separation force required for disengaging the touch fastener from a loop fastener. In this case, the increase in the overall height measured perpendicular to the sheet-form base from a lowermost extent of the tip to an uppermost extent of the head will provide the anticipated success of increasing the force required to separate the touch fastener from a loop fastener since the added crook height will prevent the disengagement of the fastening element from the loop fastener. Especially since the value disclosed by Seth is very close to the claimed value. Additionally, a ratio of an overall height of the crook measured perpendicular to the sheet-form base from a lowermost extent of the tip to an uppermost extent of the crook to an entrance height measured perpendicular to the sheet-form base below a lowermost extent of the tip is greater than 0.6, this claim limitation is met as the height of the head is increased since the entrance height decreases as the height of the head increases and the overall height of the crook also increases as the height of the head is increased because the height of the head is increased by lowering the lowermost extent of the tip.

The crook defines an under crook angle of at least 180 degrees (Fig. 6a).

The head has an overall thickness (267 μm), measured parallel to the base and perpendicular to a plane of the crook, that is greater than the entrance height (556 μm - 292 = 264 μm) of the crook.

3. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Seth in view of Kennedy (US 6,248,918 B1).

Seth discloses a touch fastener having all the limitations listed above for the rejection of claim 1. Seth fails to disclose that the touch fastener component further comprises a backing material laminated to a side of the base opposite the fastener elements. However, Kennedy teaches a touch fastener component having a sheet-form base (20) and an array of fastener elements (21). Each fastener element comprises a molded stem extending outwardly from and integrally with the sheet-form base and a head extending from a distal end of the stem to a tip (Figs. 5-9A). The head has a lower surface forming a crook for retaining loops (Figs. 5-9A). A backing material (22,23,24, 25,26,27,28,29,30) laminated to a side of the base opposite the fastener elements. Kennedy teaches a process to add different laminates to a backing material in an economical way while providing a strong bond without providing foreign material (C. 3, L. 47-61). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have a touch fastener component further comprising a backing material laminated to a side of the base opposite the fastener elements as taught by Kennedy in the touch fastener component of Seth. Doing so, is possible by a process that adds different laminates to a backing material in an economical way while providing a strong bond without the use of foreign materials.

4. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Seth in view of Ausen et al. (US 2004/0068848 A1).

Seth discloses a touch fastener having all the features mentioned above for the rejection of claim 1. Seth is silent about the density of the fastener elements. Seth fails to disclose that the fastener elements are arranged in a density of at least 350 fastener

elements per square inch of the base. However, Ausen et al. teaches a touch fastener component (11",14") having a sheet-form base (11") and an array of fastener elements (14"). Each fastener element comprises a molded stem (15") extending outwardly from and integrally with the sheet-form base and a head (36" or 37") extending forward from a distal end of the stem to a tip. The head has a lower surface forming a crook (19") for retaining loops. The head has an overall height (341 μm), measured perpendicular to the sheet-form base from a lowermost extent of the tip to an uppermost extent of the head, that is greater than 55 percent of an overall height (606 μm) of the fastener element, measured perpendicular to the sheet-form base. The fastener elements are arranged in a density of at least 350 fastener elements per square inch of the base (End of paragraph 0036). Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to have the fastener elements arranged in a density of at least 350 fastener elements per square inch of the base as taught by Ausen in the touch fastener disclose by Seth. Especially since Ausen teaches that providing a density of more than 350 fastener elements per square is well known the hook and loop fastener art.

5. Claims 1-5, 8-16, 22-27, 30, 31, 40, 41, 46-50, 52 and 56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ausen et al.

Ausen discloses a touch fastener component (11",14") has a sheet-form base (11") and an array of fastener elements (14"). Each fastener element comprises a molded stem (15") extending outwardly from and integrally with the sheet-form base and a head (36" or 37") extending forward from a distal end of the stem to a tip. The head

has a lower surface forming a crook (19") for retaining loops. The head has an overall height (341 μm), measured perpendicular to the sheet-form base from a lowermost extent of the tip to an uppermost extent of the head, that is greater than 55 percent of an overall height (606 μm) of the fastener element, measured perpendicular to the sheet-form base. Ausen fails to disclose that the ratio of an overall height of the crook, measured perpendicular to the sheet-form base from a lowermost extent of the tip to an uppermost extent of the crook, to an entrance height measured perpendicular to the sheet-form base below a lowermost extent of the tip, is greater than 0.6. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have a ratio of an overall height of the crook measured perpendicular to the sheet-form base from a lowermost extent of the tip to an uppermost extent of the crook to an entrance height measured perpendicular to the sheet-form base below a lowermost extent of the tip is greater than 0.6 since size of a prior art device is a design consideration within the skill of the art. In re Rose, 220 F.2d 459, 105 USPQ 237 (CCPA 1955). In this case, a person of ordinary skill in the art has a good reason to pursue the increase in the overall height measured perpendicular to the sheet-form base from a lowermost extent of the tip to an uppermost extent of the head since it would be obvious to try such a change and this change has a reasonable expectation of success. KSR International C. v. Teleflex, Inc., 82 USPQ2d at 1396 (2007). The dimensions of the fastening elements are commonly changed within the hook or loop fastening art in order to increase or decrease the separation force required for disengaging the touch fastener from a loop fastener. In this case, the increase in the overall height measured

perpendicular to the sheet-form base from a lowermost extent of the tip to an uppermost extent of the head will provide the anticipated success of increasing the force required to separate the touch fastener from a loop fastener since the added crook height will prevent the disengagement of the fastening element from the loop fastener. Especially since the value disclosed by Ausen is very close to the claimed value. Additionally, a ratio of an overall height of the crook measured perpendicular to the sheet-form base from a lowermost extent of the tip to an uppermost extent of the crook to an entrance height measured perpendicular to the sheet-form base below a lowermost extent of the tip is greater than 0.6, this claim limitation is met as the height of the head is increased since the entrance height decreases as the height of the head increases and the overall height of the crook also increases as the height of the head is increased because the height of the head is increased by lowering the lowermost extent of the tip.

Each fastener element has multiple heads extending in different directions and forming separate crooks (Fig. 7a).

Each fastener element has two heads extending in essentially opposite directions (Fig. 7a).

The overall head height is less than 60 percent of the overall height of the fastener element (3rd line of Table 1).

The tip extends toward the base (Fig. 7a).

The lower surface of the head is arched (Fig. 7a).

The head and stem form a unitary molded structure (Fig. 7a).

The head has a surface of resin cooled against a mold surface (Fig. 7a).

The stem has opposing surfaces defined by severed resin (Fig. 7a). The stem and head have side surfaces lying in parallel planes (Figs. 7a and 7b).

The crook overhangs a surface of the stem (Fig. 7a).

The overhung stem surface extends at an inclination angle of between about 20 and 30 degrees with respect to a normal to the base (Fig. 7a).

The fastener elements are arranged in a density of at least 350 fastener elements per square inch of the base (end of paragraph 0036).

The fastener elements together cover at least 20 percent of an overall surface area of the base from which the fastener elements extend (Fig. 10).

Ausen discloses a touch fastener component (11",14") has a sheet-form base (11") and an array of fastener elements (14"). Each fastener element comprises a molded stem (15") extending outwardly from and integrally with the sheet-form base and two head (36"37) extending in opposite directions from a distal end of the stem to corresponding tips. The heads have lower surfaces forming crooks (19") for retaining loops. At least one head has an overall height (341 μm), measured perpendicular to the sheet-form base from a lowermost extent of the tip to an uppermost extent of the head, that is greater than half of an overall height (606 μm) of the fastener element, measured perpendicular to the sheet-form base. Ausen fails to disclose that the ratio of an overall height of the crook, measured perpendicular to the sheet-form base from a lowermost extent of the tip to an uppermost extent of the crook, to an entrance height measured perpendicular to the sheet-form base below a lowermost extent of the tip, is greater than 0.6. However, it would have been obvious to one having ordinary skill in the art at the

time the invention was made to have a ratio of an overall height of the crook measured perpendicular to the sheet-form base from a lowermost extent of the tip to an uppermost extent of the crook to an entrance height measured perpendicular to the sheet-form base below a lowermost extent of the tip is greater than 0.6 size of a prior art device is a design consideration within the skill of the art. In re Rose, 220 F.2d 459, 105 USPQ 237 (CCPA 1955). In this case, a person of ordinary skill in the art has a good reason to pursue the increase in the overall height measured perpendicular to the sheet-form base from a lowermost extent of the tip to an uppermost extent of the head since it would be obvious to try such a change and this change has a reasonable expectation of success. KSR International C. v. Teleflex, Inc., 82 USPQ2d at 1396 (2007). The dimensions of the fastening elements are commonly changed within the hook or loop fastening art in order to increase or decrease the separation force required for disengaging the touch fastener from a loop fastener. In this case, the increase in the overall height measured perpendicular to the sheet-form base from a lowermost extent of the tip to an uppermost extent of the head will provide the anticipated success of increasing the force required to separate the touch fastener from a loop fastener since the added crook height will prevent the disengagement of the fastening element from the loop fastener. Especially since the value disclosed by Ausen is very close to the claimed value. Additionally, a ratio of an overall height of the crook measured perpendicular to the sheet-form base from a lowermost extent of the tip to an uppermost extent of the crook to an entrance height measured perpendicular to the sheet-form base below a lowermost extent of the tip is greater than 0.6, this claim limitation is met

as the height of the head is increased since the entrance height decreases as the height of the head increases and the overall height of the crook also increases as the height of the head is increased because the height of the head is increased by lowering the lowermost extent of the tip.

Both of the heads have overall heights that are greater than half of the overall height of the fastener element (Line 3 of Table 1).

The overall head height is less than 60 percent of the overall height of the fastener element (Line 3 of Table 1).

The crooks overhang surfaces of the stem, and wherein the overhung stem surfaces extend at an inclination angle of between about 20 and 30 degrees with respect to a normal to the base (Fig. 7a).

Ausen discloses a touch fastener component (11",14") has a sheet-form base (11") and an array of fastener elements (14"). Each fastener element comprises a molded stem (15") extending outwardly from and integrally with the sheet-form base and a head (36" or 37") extending forward from a distal end of the stem to a tip. The head has a lower surface forming a crook (19") for retaining loops. Ausen fails to disclose that the ratio of an overall height of the crook, measured perpendicular to the sheet- form base from a lowermost extent of the tip to an uppermost extent of the crook, to an entrance height measured perpendicular to the sheet-form base below a lowermost extent of the tip, is greater than 0.6. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have a ratio of an overall height of the crook measured perpendicular to the sheet- form base from a lowermost

extent of the tip to an uppermost extent of the crook to an entrance height measured perpendicular to the sheet-form base below a lowermost extent of the tip is greater than 0.6 since size of a prior art device is a design consideration within the skill of the art. In re Rose, 220 F.2d 459, 105 USPQ 237 (CCPA 1955). In this case, a person of ordinary skill in the art has a good reason to pursue the increase in the overall height measured perpendicular to the sheet-form base from a lowermost extent of the tip to an uppermost extent of the head since it would be obvious to try such a change and this change has a reasonable expectation of success. KSR International C. v. Teleflex, Inc., 82 USPQ2d at 1396 (2007). The dimensions of the fastening elements are commonly changed within the hook or loop fastening art in order to increase or decrease the separation force required for disengaging the touch fastener from a loop fastener. In this case, the increase in the overall height measured perpendicular to the sheet-form base from a lowermost extent of the tip to an uppermost extent of the head will provide the anticipated success of increasing the force required to separate the touch fastener from a loop fastener since the added crook height will prevent the disengagement of the fastening element from the loop fastener. Especially since the value disclosed by Ausen is very close to the claimed value. Additionally, a ratio of an overall height of the crook measured perpendicular to the sheet-form base from a lowermost extent of the tip to an uppermost extent of the crook to an entrance height measured perpendicular to the sheet-form base below a lowermost extent of the tip is greater than 0.6, this claim limitation is met as the height of the head is increased since the entrance height decreases as the height of the head increases and the overall height of the crook also

increases as the height of the head is increased because the height of the head is increased by lowering the lowermost extent of the tip.

The crook defines an under crook angle of at least 180 degrees (Fig. 7a).

Ausen discloses a touch fastener component having all the features mentioned above. Each fastener element defines an upper well between the two oppositely-directed heads, the well extending down to a height, measured perpendicularly from the base, of at least about 10 percent of the overall height of one of the two oppositely-directed heads (Fig. 6a). Ausen fails to disclose that each fastener element defines an upper well between the two oppositely-directed heads, the well extending down to a height, measured perpendicularly from the base, of at least about 70 percent of the overall height of one of the two oppositely-directed heads. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have each fastener element defines an upper well between the two oppositely-directed heads, the well extending down to a height, measured perpendicularly from the base, of at least about 70 percent of the overall height of one of the two oppositely-directed heads since a change in the size of a prior art device is a design consideration within the skill of the art. In re Rose, 220 F.2d 459, 105 USPQ 237 (CCPA 1955). In this case, a person of ordinary skill in the art has a good reason to pursue the increase in the height of the upper well since it would be obvious to try such a change and this change has a reasonable expectation of success. KSR International C. v. Teleflex, Inc., 82 USPQ2d at 1396 (2007). The dimensions of the fastening elements are commonly changed within the hook or loop fastening art in order to increase or decrease the

separation force required for disengaging the touch fastener from a loop fastener. In this case, the increase in the height of the upper well will provide the anticipated success of increasing the flexibility of the crook and thereby increasing the force required to separate the touch fastener from a loop fastener since the added crook height will prevent the disengagement of the fastening element from the loop fastener.

Ausen also disclose that each fastener element has an overall length between opposite extents of the oppositely-directed heads, measured parallel to the base, of at least 1.27 (sample 9 of table 3 with length of 544 μm and a height of 426 μm) times the overall height of the fastener element. Ausen fails to disclose that each fastener element has an overall length between opposite extents of the oppositely-directed heads, measured parallel to the base, of at least 1.8 times the overall height of the fastener element. However, it would have been obvious to one having ordinary skill in the art at the time of Applicant's invention to provide each fastener element has an overall length between opposite extents of the oppositely-directed heads, measured parallel to the base, of at least 1.8 times the overall height of the fastener element since a change in the size of a prior art device is a design consideration within the skill of the art. In re Rose, 220 F.2d 459, 105 USPQ 237 (CCPA 1955). In this case, a person of ordinary skill in the art has a good reason to pursue the increase in the length of the fastening element since it would be obvious to try such a change and this change has a reasonable expectation of success. KSR International C. v. Teleflex, Inc., 82 USPQ2d at 1396 (2007). The dimensions of the fastening elements are commonly changed within the hook or loop fastening art in order to increase or decrease the separation

force required for disengaging the touch fastener from a loop fastener. In this case, the increase in the increase in length will provide the anticipated success of providing a fastener element with adequate strength, peeling resistance, high rate of engagement and good durability.

Ausen discloses a touch fastener component having a sheet-form base and an array of fastener elements. Each fastener element comprises a molded stem extending outwardly from and integrally with the sheet-form base and a head extending forward from a distal end of the stem to a tip. The head has a lower surface forming a crook for retaining loops. The fastener element has a bulk aspect, defined as a ratio of the product of an overall length of the fastener element, measured parallel to the sheet-form base in the engagement direction above an elevation of the tip, and fastener element thickness, measured parallel to the sheet-form base and the engagement direction at the elevation of the tip, to an overall height of the fastener element, measured perpendicular to the sheet-form base (Table 3). Ausen fails to disclose that the bulk aspect is more than 0.020 inch (0.51 mm) since the overall length the fastener element is smaller than the height of the fastener element. However, it would have been obvious to one having ordinary skill in the art at the time of Applicant's invention to provide each fastener element has an overall length between opposite extents of the oppositely-directed heads, measured parallel to the base, of at about twice the overall height of the fastener element since a change in the size of a prior art device is a design consideration within the skill of the art. In re Rose, 220 F.2d 459, 105 USPQ 237 (CCPA 1955). In this case, a person of ordinary skill in the art has a good reason to pursue the

increase in the length of the fastening element since it would be obvious to try such a change and this change has a reasonable expectation of success. KSR International C. v. Teleflex, Inc., 82 USPQ2d at 1396 (2007). The dimensions of the fastening elements are commonly changed within the hook or loop fastening art in order to increase or decrease the separation force required for disengaging the touch fastener from a loop fastener. In this case, the increase in the increase in length will provide the anticipated success of providing a fastener element with adequate strength, peeling resistance, high rate of engagement and good durability.

The product of overall length and fastener element thickness, multiplied by a number of fastener elements disposed in an array on the base, is greater than about 20 percent of an area of the base populated by the array (Fig. 10).

The crook overhangs a surface of the stem, and wherein the overhung stem surface extends at an inclination angle of between about 20 and 30 degrees with respect to a normal to the base (Fig. 5a-14).

Response to Arguments

Applicant's arguments filed 22 December 2008 have been fully considered but they are not persuasive.

The Applicant argues that Seth and Ausen fail to disclose that having an overall height that is greater than 55 percent of the overall height of the fastener element and a ratio of an overall height of the crook to an entrance height that is greater than 0.6 are

important to enabling strong short fasteners. This argument fails to persuade. The rationale that is obvious to try is not solely based on the disclosure of the reference that is being used to make the rejection but it also depends on the level of ordinary skill in the art. A solution to a problem may have an infinite number of possible solution, however, there are a number of solutions that a person of ordinary skill in the art will understand to be more reasonable than others. A person of ordinary skill in the art will acknowledge that the strength of the hook members can be increased by increasing the amount area of the touch fastener component that engages the loop component. Increasing the area of the crook that comes into direct contact with the loop component will result in a stronger touch fastener component since the more loops of the loop component will be engaged by the crooks of the fastener component and this additional area will provide more resistance against separation. Therefore, a person of ordinary skill in the art will acknowledge that increasing the effective area of the hook (area that will engage loops of the loop component) will yield a stronger fastener component.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ruth C Rodriguez whose telephone number is (571) 272-7070. The examiner can normally be reached on M-F 07:15 - 15:45.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Victor D. Batson can be reached on (571) 272-6987.

Submissions of your responses by facsimile transmission are encouraged. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-6640.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

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you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/RCR/
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rcr
March 23, 2009

/Robert J. Sandy/
Primary Examiner, Art Unit 3677